

Customer No.: 31561
Application No.: 10/630,983
Docket NO.: 15650-US-PA

REMARKS

Present Status of the Application

The Non-Final Office Action rejected claims 1-3, 5 and 6 under 35 U.S.C 103(a) as being unpatentable over Furuchi (US Pat. 6,121,813 and hereinafter "Furuchi"). Claim 4 is rejected under 35 U.S.C 103(a) as being unpatentable over Furuchi, and further in view of the admitted prior art, Fig. 1 in the present application. Claims 7-14 are allowed. Reconsideration and allowance of claims 1-6 are respectfully requested.

Discussion of Rejection on Claims 1-3, 5 and 6 under 35 USC 103(a)

The final Office Action rejected claims 1-3, 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over Furuchi.

Applicant respectfully disagrees and traverses the above rejection as set forth below.

First, with regard to claim 1, a noise filter comprising a CMOS inverter and two capacitors are claimed. Input of the CMOS inverter is coupled with an input pad of the integrated circuit and output of the CMOS inverter is directly connected with an input buffer. Two capacitors are inserted between the output of the CMOS inverter and two voltage sources (VDD and VSS) respectively.

Furuchi discloses in Fig. 3 a configuration including a CMOS inverter 101, an integration circuit 104 and another CMOS inverter 102. See Column 5 Lines 47-51. The output of the CMOS inverter 101 is coupled to the integration circuit 104 (which is used as a delay circuit

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having a noise reducing function). Accordingly, Furuchi does not disclose a CMOS inverter having an output directly connected to an input buffer because an input buffer is totally different from a delay circuit.

Therefore, one of ordinary skill in the art at the time of applicant's invention was made is not motivated to change the disclosure by Furuchi to get currently amended claim 1 obvious.

Secondly, regarding to the integration circuit 104 disclosed by Furuchi, one skilled person does not have any motivation to modify the disclosure of Furuchi to make claim 1. The reasons are set as below.

Furuchi's integrated circuit 104 is a delay circuit having a noise reducing function. Which means the integrated circuit 104 is similar to a noise filter. The integrated circuit 104 of Furuchi includes a resistor 7 and two capacitors 10 and 11. Furuchi uses a very conventional filter/delay circuit (resistor and capacitor(s)) and it is very clear that a resistor 7 is necessary and not ignorabe as a component of the integrated circuit 104 (see column 6 lines 19-21, which say that the charge accumulated on the capacitor 10 is drained to ground via the resistor 7 and the n-channel transistor 4; and column 6 lines 63-65, which say that $(C1+C2)R$ is needed to obtain the necessary delay time for the delay circuit.)

However, in claim 1 of the present application, a noise filter having a CMOS inverter and two capacitors are claimed. A resistor is not used as a part of the noise filter in Claim 1. Claim 1 does not include any resistor because the resistor will decrease the speed of the circuit. Besides, an equivalent resistance, provided by the CMOS inverter, is changed according to an input

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voltage/signal. This gives faster operation speed when the input voltage swings fully. Claim 1 has better performance than Furuchi's integration circuit 104.

Therefore, one of ordinary skill in the art at the time of applicant's invention was made is not motivated to change the disclosure by Furuchi to get currently amended claim 1 obvious.

Consequently, Furuchi does not render claim 1 obvious, and the rejection should be withdrawn.

Because independent claim 1 are allowable over the prior art of record, its dependent claims 2, 3, 5 and 6 are allowable as a matter of law, for at least the reason that the dependent claims contain all features/elements of their respectively independent claims.

Discussion of Rejection on Claim 4 under 35 USC 103(a)

Claim 4 is rejected under 35 U.S.C 103(a) as being unpatentable over Furuchi, and further in view of the admitted prior art, Fig. 1 in the present application.

As discussed above, because Claim 1 is patentable over Furuchi, its dependent claim 4 is allowable as a matter of law and the rejection should be withdrawn.

Allowable subject matter

Thanks to the examiner for the allowance of claims 7-14.

Prior Art Made of Record

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The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

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CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-14 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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